<u>AMENDMENTS TO THE CLAIMS</u>

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-18 (Canceled)

19. (Currently Amended) A lateral maneuverability map for a vehicle that represents, within an area of movement<u>:</u>

~~, the contours~~ <u>- contours</u> of nonnegotiable regions <u>to be circumvented.</u>

<u>- bands surrounding nonnegotiable regions and having the width of a maneuver space considered as necessary for a free lateral movement for the vehicle, taking into account the maneuvering capabilities of the vehicle and the need for the vehicle to avoid regions arbitrarily considered as nonnegotiable, and</u>

<u>- regions of complete freedom of lateral movement for the vehicle situated outside nonnegotiable regions and surrounding bands.</u> ~~of complete freedom of lateral movement for the vehicle, taking into account the maneuvering capabilities of the vehicle and the need for the vehicle to avoid regions arbitrarily considered as nonnegotiable.~~

20. (Previously Presented) The map as claimed in claim 19, added, as a transparent overlay, to a map delivered by a navigation system.

21. (Currently Amended) The map as claimed in ~~claim 20~~ <u>claim 19</u>, designed for an aircraft provided with a system for preventing the risk of collision with the ground, which delivers a ground collision risk map, and added, as a transparent overlay, to the ground collision risk map.

22. (Previously Presented) The map as claimed in claim 20, added, as a transparent overlay, to a map delivered by a navigation system, the regions of complete freedom of lateral movement appearing by semitransparent masking.

23. (Previously Presented) The map as claimed in claim 20, added as a transparent overlay, to a map delivered by a navigation system, the regions of complete freedom of lateral movement appearing by masking using textures.

24. (Canceled)

25. (Canceled)

26. (Currently Amended) The map as claimed in ~~claim 24~~ claim 19, wherein the <u>different regions and surrounding bands</u> ~~various types of regions~~ are represented in false colors.

27 (Currently Amended) The map as claimed in ~~claim 24~~ claim 19, wherein the <u>different regions and surrounding bands</u> ~~various types of regions~~ are represented by different textures.

28. (Currently Amended) The map as claimed in ~~claim 24~~ claim 19, wherein the <u>surrounding bands and regions of complete freedom of lateral movement are</u> ~~second and third types of region is~~ represented with iso-distance lines with respect to the borders of the <u>nonnegotiable</u> regions to be circumvented.

29. (Currently Amended) The map as claimed in ~~claim 24~~ claim 19, wherein the <u>surrounding bands and regions of complete freedom of lateral movement are</u> ~~second and third types of region is~~ represented with color gradations representative of distances from the borders of the <u>nonnegotiable</u> regions to be circumvented.

30. (Currently Amended) The map as claimed in ~~claim 25~~ claim 19, wherein the width of the <u>surrounding</u> bands ~~constituting the second type of region~~ takes into account the instantaneous performance of the aircraft.

31. (Currently Amended) The map as claimed in ~~claim 25~~claim 19, wherein the width of the <u>surrounding</u> bands ~~constituting the second type of region~~ takes into account the flight envelope of the aircraft.

32. (Currently Amended) The map as claimed in ~~claim 25~~ claim 19, wherein the width Sd of the underlined surrounding bands constituting the second type of region is determined by applying the equation:

$$Sd = HLD\_M + HLD\_T + \sqrt{\left(\frac{HLD\_L}{2}\right)^2 + HLD\_T^2}$$

HLD_M being a safety margin;

HLD_L being a configuration datum defined in terms of flight time or distance traveled over the ground;

HLD_T being a turning radius corresponding to the equation:

$$HLD\_T = \frac{GS^2}{g \times \tan(HLD\_B)}$$

g being the gravitational acceleration;

GS being the ground speed of the aircraft; and

HLD_B being the maximum value permitted for the roll angle adopted by the aircraft when turning.

33. (Currently amended) A method for obtaining a map ~~as claimed in claim 19~~, comprising ~~the following steps~~:

- generation, from knowledge of the regions considered as nonnegotiable and to be circumvented, and of elements of a database of elevations of the terrain covering the area of movement, of a distance map covering the area of movement of the vehicle to be mapped and giving the distances from its external points to the regions to be circumvented, relative to the borders of the regions to be circumvented;

- assembly as regions of complete freedom of lateral movement, of connex points, the distances from which, provided by the distance map, are greater than a threshold arbitrarily considered as necessary for free lateral movement of the vehicle; and

- representation of the contours of these regions of complete freedom of lateral movement.

34. (Currently Amended) [[The]] A method for obtaining a map as claimed in claim 25 further comprising the following steps:

- generation, from knowledge of the regions considered as nonnegotiable and to be circumvented, and of elements of a database of elevations of the terrain covering the area of movement, of a distance map covering the area of movement of the vehicle to be mapped and giving the distances from its external points to the regions to be circumvented, relative to the borders of the regions to be circumvented;

- considering the regions to be circumvented as a first type of region,

- assembly in regions of a second type, of the connex points whose distances provided by the distance map are less than a threshold arbitrarily considered as necessary for free lateral movement of the vehicle,

- [[and]] assembly in regions of a third type of the connex points whose distances provided by the distance map are greater than said threshold; and

- representation of the area of movement in the form of a subdivision into these three types of region.

35. (Previously Presented) The method as claimed in claim 33, wherein the distance map is obtained by means of a chamfer distance transform.

36. (Previously Presented) The method as claimed in claim 33, wherein the distances mentioned in the distance map are used to plot the lines of iso-distance from the borders of the nonnegotiable regions.

37. (New) A lateral maneuverability map for a vehicle that represents, within an area of movement, the contours of regions of complete freedom of lateral movement for the vehicle, taking into account the maneuvering capabilities of the vehicle and the need for the vehicle to avoid regions arbitrarily considered as nonnegotiable,

the map representing, within an area of movement, various types of regions distinguished from each other by the possibility of the vehicle to negotiate them or not and, for the types of negotiable regions by the extent of the lateral maneuvering freedom left to the vehicle owing to its maneuvering capabilities and to the need for it to avoid the nonnegotiable areas,

wherein the regions represented are at least of three separate types: a first type corresponding to the nonnegotiable regions, a second type corresponding to bands surrounding the nonnegotiable regions and having the width of a maneuver space considered as necessary for a free lateral movement of the vehicle, and a third type corresponding to regions of free movement, and

wherein the width Sd of the bands constituting the second type of region is determined by applying the equation:

$$Sd = HLD\_M + HLD\_T + \sqrt{\left(\frac{HLD\_L}{2}\right)^2 + HLD\_T^2}$$

HLD_M being a safety margin;

HLD_L being a configuration datum defined in terms of flight time or distance traveled over the ground;

HLD_T being a turning radius corresponding to the equation:

$$HLD\_T = \frac{GS^2}{g \times \tan(HLD\_B)}$$

g being the gravitational acceleration;

GS being the ground speed of the aircraft; and

HLD_B being the maximum value permitted for the roll angle adopted by the aircraft when turning.